



M2

Universal System Controller

M2

Operation Guide

v1.0



FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: MMURTI0700

CAN: 3166-RTI0700

BATTERY DISPOSAL

This product is shipped with non-rechargeable alkaline batteries. These batteries are generally considered not to be environmentally hazardous. In most cases they can be disposed of in normal household trash, but you should always verify and follow your local regulations.

Do not burn or incinerate used batteries, as it may cause internal materials to explode.

It is important not to dispose of large amounts of alkaline batteries in a group. Used batteries are often not completely "dead." Grouping used batteries together can bring these "live" batteries into contact with one another, creating safety risks..

SAFETY SUGGESTIONS

Read Instructions. Read all safety and operating instructions before operating the unit.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Batteries. When replacing batteries, use only new ones. Do not mix new and used batteries together. Rechargeable batteries are not recommended for this product.

Cleaning. The unit should be cleaned only as recommended in the operating guide.

Servicing. Do not attempt any service beyond that described in the operating guide. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when the unit does not appear to operate normally or exhibits a marked change in performance.

LIMITED WARRANTY

Remote Technologies Incorporated warrants its products for a period of one (1) year (does not apply to included batteries) from the date of purchase from Remote Technologies Incorporated or an authorized Remote Technologies Incorporated distributor.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required.

Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are not covered by the warranty:

Damage resulting from:

1. Accident, misuse, abuse, or neglect.
2. Failure to follow instructions contained in this Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Causes other than product defects, including lack of skill, competence or experience of user.
5. Shipment of this product (claims must be made to carrier).
6. Being altered or which the serial number has been defaced, modified or removed.

Remote Technologies Incorporated is not liable for any damages caused by its products or for its failure of its products to perform, including any lost profits, lost savings, incidental damages, or consequential damages.

Remote Technologies Incorporated is not liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made by you for a third party.

Remote Technologies Incorporated's liability for any defective product is limited to repair or replacement of the product, at our option.

If your M2 needs service, please contact Remote Technologies Incorporated by telephone, fax or e-mail for return information.

Please do not return products to RTI without return authorization.

DISCLAIMER

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M2, It's Under Control, TheaterTouch, and the RTI logo are trademarks of Remote Technologies Incorporated.

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Chapter 1. Welcome

Thank you for purchasing the M2 universal system controller. The M2 combines the power and flexibility of a graphic LCD display with an ergonomic design that permits effortless one-handed operation. This design overcomes the need for a compromise between form and function. Sleek and perfectly balanced, the M2 is infinitely flexible and expandable.

The M2 takes complete control of your home electronics, replacing all other remotes. It features an intuitive, easy to read LCD that can display custom text, graphics, symbols, and icons. In addition to the backlit display, 33 “Hard” keypad buttons allow easy access to frequently used functions.

Programming is easy and convenient thanks to the Windows® based *TheaterTouch Designer™* software. Because RTI’s remote control products are sold only through professional installers/programmers, and never directly to consumers, it is our philosophy to not incorporate programming capability directly into our products. Instead, we are committed to providing our dealers with the hardware and software tools that allow them to create re-usable programming databases and templates in the most efficient and reliable way possible.

The M2 is capable of both infrared and radio frequency output. Optional RF receivers are available for transmission through walls and cabinets. The RF receivers connect to an RTI control system for the ultimate in control reliability and flexibility. RTI control systems can provide many advanced features such as IR routing, local macro execution, power sensing, and RS-232 control.

COMPATIBILITY NOTE

The M2 and *TheaterTouch Designer* software are compatible with infrared (IR) commands with carrier frequencies between 15KHZ and 460KHZ, as well as those commands that do not use a carrier. This covers virtually all of the remotes that exist to date.

UNPACKING AND INSPECTION

After unpacking your new M2 universal system controller, save all of the packing materials in case you ever have to ship the unit.

Thoroughly inspect the M2 and packing materials for signs of damage. Report any damage to the carrier immediately. Report any equipment malfunctions to Remote Technologies Incorporated or an authorized Remote Technologies Incorporated distributor.

PRODUCT CONTENTS

Contents within the box include the following items:

- One (1) M2 universal system controller
- Four (4) AAA alkaline batteries.
- One (1) Operation guide.

SOFTWARE REQUIREMENTS

The recommended minimum system requirements needed to run the *TheaterTouch Designer* software are as follows:

- Windows 98SE[®], Windows ME[®], Windows 2000[®], Windows XP[®] or later version.
- A free USB port.
- At least 64 Megabytes of RAM.
- At least 100 Megabytes of free disk storage.
- Screen resolution of 800x600 with 16-bit color.
- A mouse is required.
- Optional printer for printing reports.

Chapter 2. Introduction

FEATURES

The M2 provides superior quality and reliability as well as these specific features:

- Replaces all of the remote controls in a home. The M2 can reproduce all of the commands of almost any other infrared remote control.
- A programmable graphic display. The M2 uses powerful Windows® based software that makes it easy to place text, graphics, symbols and icons anywhere on the display.
- A wide temperature, high-contrast LCD with white backlight. The display's transfective screen makes it easy to read in any lighting condition - even in sunlight.
- 33 backlit "hard" keypad buttons that allow easy access to frequently used functions.
- A built-in low battery indicator warns you when it's time to replace the batteries.
- A macro function. This feature allows the M2 to perform a series of commands by pressing a single button. For example, you can create a macro called "Movie" that turns on the TV, sets the correct input, turns on the DVD player, dims the lights, and starts playing a movie.
- Both infrared (IR) and radio frequency (RF) output options. You can even use both options on the same unit.
- A built in motion sensor can automatically turn the unit on when it is picked up.
- An audible beeper can acknowledge button presses.

- A USB port for communication with the *TheaterTouch Designer* programming software.
- Non-volatile flash memory. The M2 will not lose any programmed data when the battery is removed.
- One-year parts and labor warranty.
- Available only to system integration professionals.

IMPORTANT NOTES

Please read these important notes about the M2:

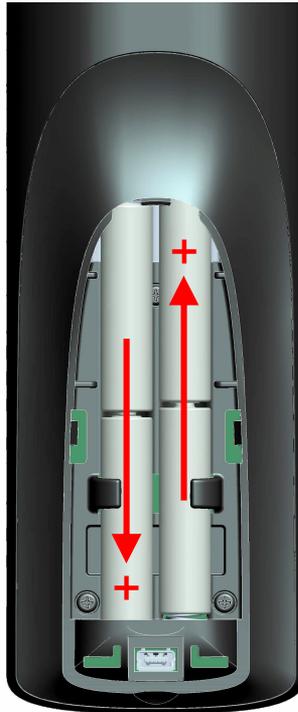
- The M2 should be placed in an area where it is around normal room temperature (between 60°F to 90°F). If the temperature is too hot, the display appears dim. If the temperature is too cold, the display appears dark and may respond slowly.
- Do not let the M2 get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the M2 to smoke, dust, or vibrations. The display may be damaged from excessive shock or vibration.
- Do not disassemble the unit. Service of the M2 should be performed by authorized personnel only.
- Use only high capacity primary (non-rechargeable) batteries. Alkaline batteries, such as those included with the M2, should provide several months of operation before requiring replacement.

CLEANING

Occasional cleaning may be required, depending on use. To clean your M2, lightly dampen a lint-free cloth with a glass cleaner or mild detergent, and wipe the display, keypad and outer surfaces.

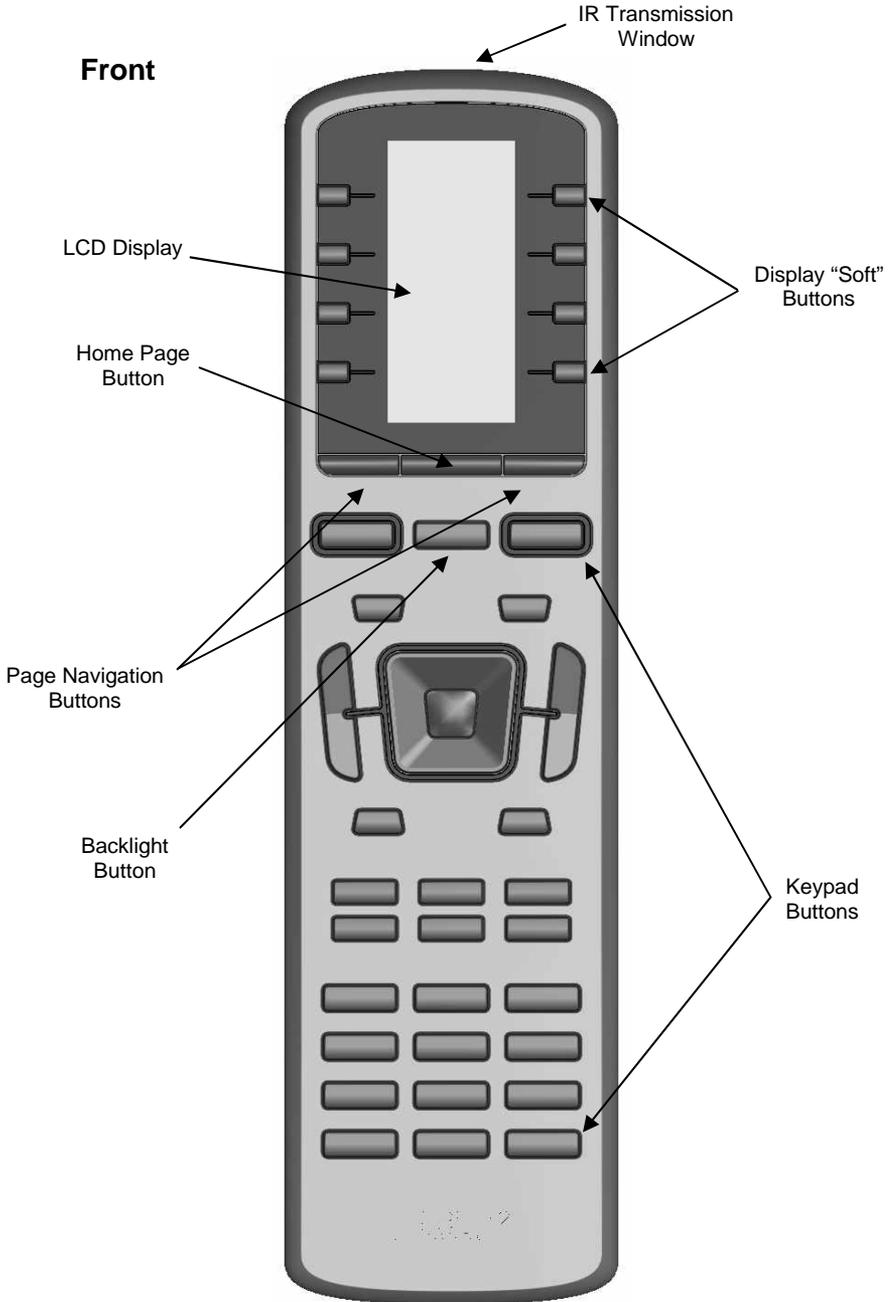
GETTING STARTED

Start by inserting four AAA batteries (included) into the battery compartment. Make sure they are oriented properly. A polarity diagram is molded into the bottom of the battery compartment.

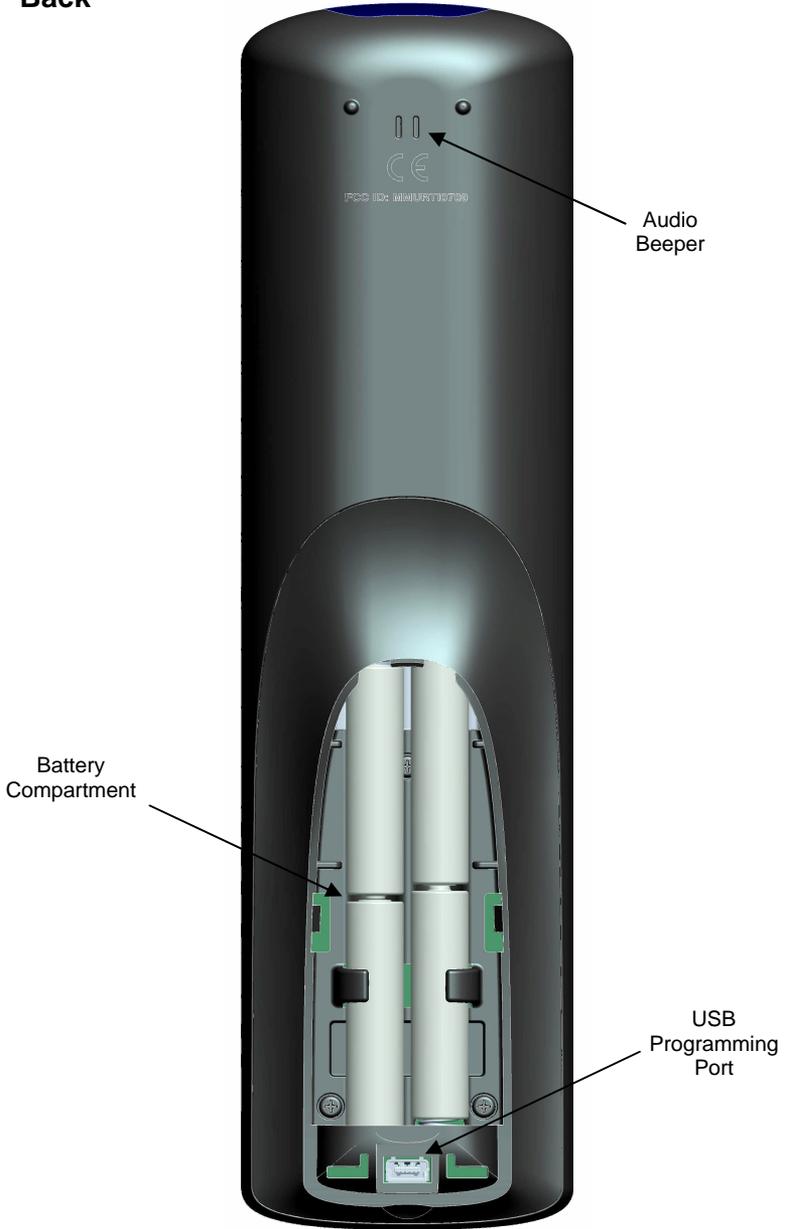


The *M2* is turned-on by touching any keypad button. If the tilt sensor is enabled, picking up the unit will also turn it on.

REMOTE REFERENCE



Back



Chapter 3. Operation

THE LCD DISPLAY

The M2 display is organized as a series of pages and frames. A page consists of one to nine frames, and only one frame is displayed on the screen at a time.

Normally each frame on a page contains objects (text, graphics, etc.) that are related in some way. For instance, they may all display information necessary for controlling a particular DVD player.

By default, the M2 has one *Home* page—all other pages are normally accessed from links on the Home page. In addition, any button on any page can contain a link to any other page when selected.

Normally the Home page is used to display the names of the equipment being controlled. The M2 will support 200 pages including the Home page; each page can consist of up to 9 frames.

A representation of a programmed Home page is shown below:



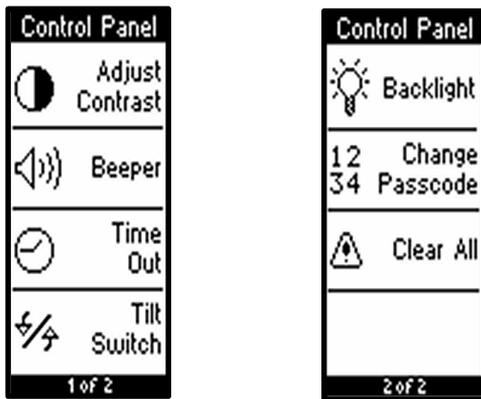
By default, pressing the HOME button at any time will return you to this page. It is possible, however, to program the Home button to behave differently if desired.

THE CONTROL PANEL PAGE

The Control Panel page can be displayed by pressing and holding the backlight button continuously for **3 seconds**.

You can also access the Control Panel page by assigning a “Control Panel” page link to a button using the *TheaterTouch Designer* software.

The Control Panel consists of the following two frames:

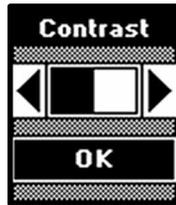


To change frames, press the *next page* button below the display.

To return to the user program, press the Home button.

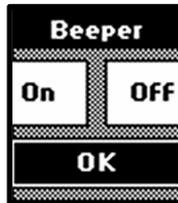
ADJUST CONTRAST

This selection displays a window that allows you to adjust the LCD contrast. Press the **Left Arrow** or **Right Arrow** soft buttons to adjust. Press either of the OK soft buttons to close.



BEEPER

This selection displays a window that allows you to turn the audible beep on or off. The beeper provides feedback that a button was pressed. Press either of the OK soft buttons to close.



TIME OUT

This selection displays a window that allows you to adjust the amount of time the unit stays awake after the last button press. The time is variable from 1 second to 60 seconds (the default is 10 seconds). Press the arrow soft buttons to the left or right of the Time Out setting to adjust the time. Press either of the OK soft buttons to close.



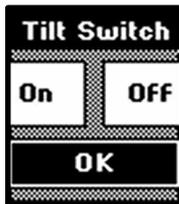
TILT SWITCH

This selection displays a window that allows you to adjust the settings for the built-in tilt switch. The tilt switch is a motion detector that turns the remote on when activated.

On means the tilt switch is active and will wake up the M2 when it is moved.

Off means the tilt switch is inactive.

Press either of the OK soft buttons to close.



CHANGE PASSCODE

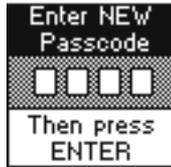
This selection displays a window that allows you to set the passcode that is used to limit access to the Clear All function in the Control Panel, as well as the Secured property that can be assigned to any button.

When you select the CHANGE PASSCODE function, the screen will prompt you to enter the **old** passcode using the numeric keypad buttons. Press the ENTER keypad button after entering the numbers.

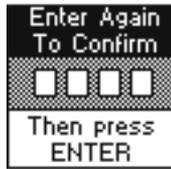
(The default code is 0000).



Now enter a **new** four-digit passcode.



You will be prompted to enter the **new** four-digit passcode again for confirmation.



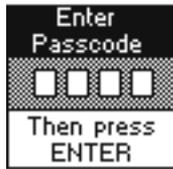
When new code is entered successfully, the "Code Changed" window will pop up to let you know you have changed the passcode.



Do not forget the passcode!

CLEAR ALL

This selection displays a window that will allow you to erase the current user program in the M2. You will be prompted to enter the current passcode. If the proper code is entered, the entire user program in the M2 will be erased.

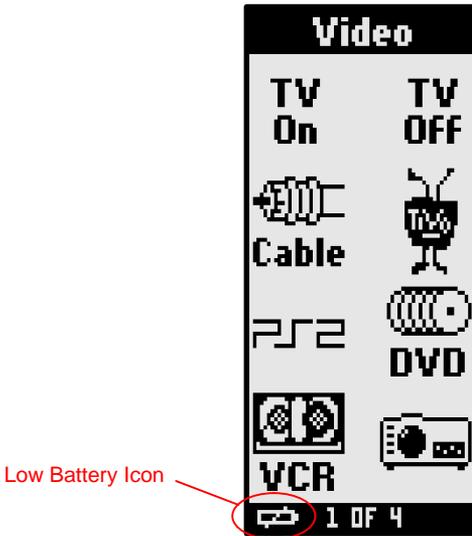


Warning! This will erase the entire user program in the M2. Once this is done there is no way to restore it, except by reloading the program from the *TheaterTouch Designer* software!

If you inadvertently select the CLEAR ALL function, simply press the ENTER keypad button without entering the passcode and you will be returned to the Control Panel page.

LOW BATTERY INDICATOR

If the M2 battery capacity is reduced to approximately 25 percent, a low battery icon will appear in the lower left side of the display:



At this point the M2 batteries should be replaced to maintain optimum performance.

PROGRAMMING THE M2

The M2 is programmed using RTI's *TheaterTouch Designer* software. RTI dealers can download the software free of charge from:

www.rticorp.com/dealers

A PC running Windows® 98SE or higher with a USB port is required. The required USB cable is included with the RTI *IR-PRO* dealer kit.

Note: The M2 will not operate normally while connected to a PC's USB port. Make sure you disconnect it from the PC to navigate pages or transmit commands. In addition, the M2 will not be able to sync with a PC's USB port while it is transmitting a command or running a macro.

Chapter 4. Troubleshooting

If you are having problems with your M2, please read these troubleshooting tips before contacting technical support.

If you continue to have problems, see Chapter 5 for more information on contacting RTI technical support.

DISPLAY IS DIM, BLANK OR UNREADABLE

Make sure the batteries are inserted properly and are new.

Try adjusting the contrast level from the **Control Panel** page (Refer to Chapter 3 for more details). By nature, the contrast of an LCD screen changes with temperature, so if the remote is cold the display will be dark and will return to normal as it warms.

USB COMMUNICATION PROBLEMS

Verify that your PC is running Windows® 98SE or higher.

Verify that the M2 is present in the Human Interface Devices section of the Device Manager within the Windows® Control Panel.

Make sure you are using the programming cable that was supplied by RTI and that both ends are connected securely.

Make sure the PC detects the presence of the M2. If it doesn't, unplug the USB cable, wait for about ten seconds, and plug it in again.

If the download fails after some data has been transferred, try re-sending the program.

IR CODE PROBLEMS

If you are using an IR repeater system, make sure it is working correctly with the original OEM remote. If not, you will need to troubleshoot the IR repeater system.

If you are still having problems, try adjusting the IR code “Minimum Repeats” value in the *TheaterTouch Designer* programming software.

If the IR code is executed inside a macro that contains multiple IR codes, try inserting a small time delay before the problem code. If there already is a delay, try increasing it.

Chapter 5. Service and Support

UPDATES AND NEW PRODUCTS

For news about the latest updates, new product information and accessories, please visit our web site at:

www.rticorp.com

CONTACTING REMOTE TECHNOLOGIES INCORPORATED

For general info, you can contact RTI at:

Remote Technologies Incorporated

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Fax (952) 253-3131

info@rticorp.com

www.rticorp.com

RTI TECHNICAL SUPPORT

At RTI, customer service and satisfaction is an utmost priority. If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance.

RTI provides technical support by telephone, fax or e-mail. For the highest quality service, please have the following information ready, or provide it in your fax or e-mail.

- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

If you are having a problem with software, please note what version you have installed, the operating system on your PC, a description of the problem, and any troubleshooting you have already tried.

If you are calling about a software or programming question or problem, please be at your computer when you place your call. This will considerably speed up the troubleshooting process.

For **Technical Support** or assistance with your RTI product, contact RTI at:

(952) 253-3137

support@rticorp.com

www.rticorp.com/support

For questions regarding **Service or Repair** of your RTI product, contact RTI at:

(952) 253-3136

service@rticorp.com

www.rticorp.com/service

Please do not return products to RTI without return authorization.

Specifications

Power	4 AAA alkaline batteries
Power Management	Automatic On/Off (tilt switch)
Infrared Control Range	30 Feet (9.1m) @ 60 Degrees
Infrared Frequency Range	15kHz - 460kHz
Radio Frequency Control Range	Up to 100 Feet (30.5m) (with optional receivers)
Radio Frequency Carrier	433MHz
Operating Temperature	+32°F to +122°F (+0°C to +50°C)
Operating Humidity	5% to 95% Non-condensing
Display	High-contrast transfective monochrome STN LCD 128h x 64w pixels
Display size (H x W)	2.1 in x .91 in (53mm x 23mm)
Backlight	White EL (display and keypad)
Total System Memory	256K Bytes Flash (non-volatile)
Device Capability	Total number of devices limited only by memory

Macro Capability	Unlimited steps in a single macro Total number of macros limited only by memory Macros allowed on every button
Communications	USB programming port
Dimensions	Length: 9.1 in. (251mm) Width: 2.4 in. (64mm) Height: 1.1 in. (28mm)
Enclosure	High-impact molded ABS plastic
Weight	7.0 oz. (200g) with batteries
Warranty	One Year Parts & Labor (30 days on batteries)

All specifications are subject to change without notice.

It's Under Control®



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